

U.S. Patent Application
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ABSTRACT

A telecommunications system and method for rapid start-up of a Global Position System (GPS) receiver integrated with a mobile terminal is disclosed. The location of a reference GPS receiver associated with a Base Transceiver Station (BTS) within the cell that the mobile terminal is currently located is used as the local position estimate for that mobile terminal. The GSM TDMA frame numbers are first correlated with the GPS clock signal. Optionally, this correlation is adjusted using the adaptive frame alignment mechanism. This local position estimate is used to ascertain the location of the GPS receiver. The correlation data is then sent to the GPS-capable mobile terminal through the Short Messaging Service (SMS) cell broadcast facility or the Broadcast Control Channel (BCCH) facility of the GSM network to enable the built-in GPS receiver to calculate its position relatively quickly.